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THE  
HISTORY OF THE SMALL-POX,  
&c.

---

THE period when this formidable disease first made its appearance in the world remains, even at the present moment, a controverted point among the learned. No medical records are remaining, which give any distinct or regular account of this pestilence, bearing an earlier date than the time of Rhasis, who, in the ninth century of the Christian era, flourished in Alexandria, and by his observations on many diseases, has established among Europeans the reputation of having been the Galen



of the East. In his treatise on the small-pox, an author of much earlier date is referred to, who accurately described the disease in the seventh century, and whose works are supposed to have perished in some of those destructive revolutions, of which eastern history affords us so many, and such melancholy examples.

Notwithstanding the absence of any medical records clearly descriptive of this pestilence previous to the seventh century, the opinion, that this disease had existed in Europe and Asia even before the birth of our Saviour, does not want its powerful and distinguished advocates. This belief is founded on those imperfect descriptions of epidemic diseases, which are to be met with in ancient medical authors, and in the works of the historians and poets of antiquity ; and it is impossible to peruse these authorities without in some degree becoming a convert to the opinion.

Rhasis is the only authority we have to rely on for establishing its earliest appearance in Africa. He expresses a belief that the small-pox existed in Arabia in the second century; and to confirm its earlier appearance in that portion of the world, every source of investigation seems unfortunately denied us.

It was in the early part of the last century that De Haen announced his belief in the great antiquity of this disease: he not only appealed to medical authorities in support of his opinions, but to passages in the works of Horace, Quintilian, and many other ancient authors, which seem to prove that the disease had established itself in Europe anterior to the Christian era, and that it first made its appearance among the ancient Greeks and Romans.

Werlhoff undertook the refutation of these assertions, and, it must be acknowledged, has succeeded in controverting



many of his positions. From this controversy has sprung the following contradictory opinions, each supported by individuals of talent and research.

1st. That in the sixth century the disease first appeared in the world in Africa.

2nd. That it existed in Europe anterior to the Christian era.

3rd. That it was introduced into Europe about the twelfth century.

4th. That it was known in Hindostan from the remotest antiquity, and originated there.

5th. That it first made its appearance among the ancient Greeks and Romans.

The testimony of Rhasis has clearly established the existence of this disease in Africa, in the middle of the seventh century. Among the evidence to prove its earlier appearance in that portion of the world, two Arabian manuscripts may be mentioned; the one discovered by Dr.

Reiske in the public library of Leyden, and the other in Africa, by the celebrated traveller Bruce, both establishing the existence, and giving a frightful picture of the destructive effects of the disease in the Abyssinian army, during the siege of Mecca, in the year 569. Admitting this fact, and it certainly appears established by sufficient evidence, it can lead to no other conclusion than that the disease actually existed in Africa at that period, and that Arabian authors have left us a very clear and perspicuous account of the epidemic. But however satisfactorily this point may be established, it can never be admitted as proof that the disease was unknown in other parts of the world, more especially as records, in which even the term *variola* is employed as descriptive of the prevailing disease, are not wanting to render it probable that three years subsequent to the siege of Mecca, and even at that very time,



the southern provinces of France, and part of Ireland, had been ravaged by this pestilence.

The earliest account of the appearance of the small-pox in Europe is to be found in a manuscript still existing in the British Museum, partly Saxon and partly Latin, in which it is said, that “St. Nicaise, Bishop of Rheims, and a martyr, A.D. 452, had been afflicted with a species of variola,” thus tracing its appearance in Europe to a period long anterior to its alleged origin in Arabia. In the chronicles of Marius, also, it is stated, “This year, A.D. 569, a violent fever with flux of the bowels and variola afflicted both Italy and France.” But an authority perhaps less questionable, and certainly more clear and decisive, is afforded us in a narrative communicated by Gregory, Bishop of Tours, who says, “Last year,” (rather later than the year 573,) “the state of Tours was desolated by a severe

pestilential disease: such was the nature of the infirmity, that a person, after being seized with violent fever, was covered over with vesicles and small pustules—the vesicles were white, hard, unyielding, and very painful; if the patient survived to their maturation, they broke, and began to discharge, when the pain was greatly increased by the adhesion of the clothes to the body.” I cannot help observing, that Gregory of Tours has been referred to as authority, with equal confidence, in support of their respective opinions, by those who maintain and by those who deny, the great antiquity of this disease in Europe. Mr. Moore, who has adopted the opinion that the small-pox had prevailed in China and Hindostan from remote antiquity, yet had not extended to the more western nations until the middle of the sixth century, in his *History of the Small-pox*, observes: “But should the slightest doubt remain



upon this subject, the evidence of Gregory, Bishop of Tours, must remove it; this saint was an eye-witness of the disease, and with the exception of a simile, he has described it with considerable precision in these words—‘ When the calamity arose, it occasioned such a depopulation of the whole country that the numbers could not be calculated, for when tombs and coffins failed, ten or more bodies were buried in the same grave; and on one Sunday three hundred corpses were numbered in the church of St. Peter’s alone; their death was sudden, for a sore appeared in the groin or arm-pit, by which the sufferers, as by the bite of a serpent, were so infected with venom, that they died on the second or third day.’ ”

Mr. Moore observes—“ This malady was evidently not the small-pox, but the plague in its most malignant form.” I do not profess to have seen the original documents from which these extracts are taken; but

on the authority of Dr. Willan, the former quotation from the records of Gregory is given, who, with every appearance of justice, and almost in the words of Mr. Moore, observes, “ This malady was evidently not the plague, but the small-pox in its most malignant form.” The justness of both conclusions seems evident, and appears to establish the opinion, that the bishop was not only an eye-witness and faithful chronicler of the plague, as it existed in the year 571, but was also an observer of an eruptive disease which prevailed sometime later than the year 573 : the description of which appears a tolerably correct picture of the small-pox of the nineteenth century.

Abdomnau, a learned Scotchman, gives the following account of the appearance of a disease in Ireland, somewhat resembling small-pox. He says—“ St. Columba, sitting on Dunmoor, a small hill in Iona, saw to the northward a thick cloud ascend from the



sea. This cloud (he said) will prove highly noxious to men and cattle ; in passing with velocity over a considerable part of Scotia, it will discharge at evening a morbiferous rain, which will cause severe purulent ulcerations to arise on human bodies, and on the udders of cattle, so that men and beasts, equally oppressed by the virulent malady, shall narrowly escape with life."

We are thus led to the belief, either that the disease, in the space of a few months, had extended itself from the central parts of Africa to nearly the northern extremity of Europe, or that in the sixth century, the pestilence was raging simultaneously in every division of the known world.

Hindustan does not want its advocates for having been the cradle of the disease ; but the early records of India are so deeply enveloped in fable, that no other positive conclusion can be drawn, than that the origin of the disease in that portion of the

world is not of recent date. The Chinese, too, though we may smile at the precision with which they attempt to establish its first appearance amongst them, yet, remembering that in their eyes “ a thousand years are but as a day,” the period 1122 years before Christ, which they have fixed upon with specious accuracy for its origin, can only allow them some claim to the belief that they were visited by this pestilence, at least as early as any other portion of the globe ; nor is this opinion invalidated by the apparent indications of great experience in the treatment of the disease, which, more than a century ago, was to be found amongst them.

Thus, it appears more than probable, that in the sixth century, the world had been generally and fatally visited by this horrid pestilence. Clearly to establish the fact of its earlier existence, is a task of much greater difficulty, though the opi-



nion may be supported by imposing evidence. Rhasis has expressed his belief that it existed in the second century. The reputation which he has established, of having toiled laboriously in the pursuit of knowledge, entitles his opinion to every confidence and respect. It is highly probable, too, that his belief was derived from sources which the variety of accidents attendant on the lapse of so many centuries, have deprived us of, and might have received ample confirmation had the whole of his works descended to us. He expressly states his opinion, that Galen was acquainted with the disease; and though the descriptions of the Greek author have been pronounced, by good authorities, vague and unsatisfactory, yet this, perhaps, may in some degree be accounted for, by the fact that among the ancients the local effects of pestilential diseases were regarded more as varieties, produced by accidental

circumstances, than as marking any specific differences in the maladies themselves. It is this circumstance which renders the testimony of the Greek authors sufficiently conclusive as to the existence of small-pox in their time, provided we can trace in their works some general outline of the striking features of the disease. From those which remain to us of the authors of the first, second, and third centuries, many such descriptions may be adduced. Ruffus, a celebrated physician of Ephesus, tells us, in the latter part of the first century, that in the pestilence, every thing the most dreadful may occur, and nothing is withheld, as in any of the diseases, singly. The appearances are various; there are different kinds of delirium, vomitings of bile, tension of the hypochondria, a sense of anxiety, frequent sweats, coldness of the extremities, bilious diarrhœa, with their flatulent discharges. The urine, in some,



thin and watery, in others bilious, in others black, with bad sediment and enœoremata of the worst kind: hæmorrhage from the nostrils, heats in the chest, a parched tongue, watchfulness, strong convulsions, and, besides other evil ulcers, the all-dreadful anthrakodia may take place in the loimos, or plague, as well on the rest of the body as on the face and tonsils. Galen also tells us, this great loimos, or pestilence, was similar in its appearance to the plague of Athens, as it appeared in the time of Thucydides. The skin was of a moderate temperature, and of a dark hue, red or livid, broken out with small phlyctinæ, or ulcerations. In another part of his works, he says, “ Putrid deatheses sometimes occasions the skin to separate extensively, so that the naked veins may be clearly seen; this took place in every part of the body, in Asia, during the time of the epidemic anthrakes, which induced those who beheld

the sufferers to think them more like apes than men.” Nothing can more clearly describe the shocking spectacle which the advanced stages of confluent small-pox presents to us, than this passage from Galen ; but, independent of the testimony of medical authors, we have also that of Philo, a Jewish philosopher, who has left us records of a pestilence existing in the first century. He says—“ The cloud of dust falling suddenly on men and cattle, produced over the whole skin a severe and untractable ulceration. The body immediately became tumid, with efflorescences or purulent phlyctinæ, which appeared like blisters, excited by a secret fire beneath. Men necessarily undergoing much pain and universal soreness, from ulceration and inflammation, suffered not less in body than in mind by the severe infliction, for a continuous ulcer was observable from head to foot ; these eruptions, which were



at first sprinkled over the limbs and other parts, finally uniting, so as to form one uniform appearance over the whole."

These statements respecting the eruptions accompanying the epidemics of the first century, render it impossible to suppose that it was the plague which at that period was depopulating the world ; not the slightest mention is ever made of bubo or carbuncle, though these local affections are necessary symptoms of that malady. That they were eruptive diseases, it is impossible to deny ; and that the descriptions of them are more characteristic of small-pox than any other genus of the Order Exanthemata, there will be found a great many to admit.

Very scanty materials are afforded us to establish the probability of the existence of this disease anterior to the Christian era ; those who maintain its existence in Europe and Asia in these early ages, ground their

belief on the testimony which the works of Livy, Lucretius, Sophocles, Orosius, &c., affords them : Lucretius, in describing the pestilential disease which depopulated Athens, says, “ The whole body reddened with vesications and fiery pustules.” Herodotus also says, “ At the commencement of this great pestilence, the whole body of a young man broke out with ulcerations.” Seneca, while enlarging on the account which Sophocles has given us of the pestilence at Thebes, beautifully exclaims, “ O new and direful face of death ! worse than death ! an irresistible languor chains the sluggish limbs, a flamy vapour burns the body’s citadel, and flushes the cheeks with blood ; then small spots besprinkle the skin, the eyes are stiffened, and the dark blood bursting the veins, distils from the contracted nostrils, while sighs and heaving breath shake the vitals.”

This testimony of Seneca appears to

deserve some little consideration ; his expressions, “ the small spots besprinkle the skin, the eyes are stiffened, and the sacred fire preys on the limbs,” can in no way be construed as descriptive of plague or erisipelas. The term, sacred fire, too, is to be found in many ancient chronicles of the eleventh and twelfth centuries, as descriptive of small-pox. “ The people died miserably, from their limbs being burnt black by a sacred fire.”

Such is a portion of the evidence which has been adduced in support of the opinion, “ that the small-pox is a disease of very great antiquity in Europe and Asia.” That part of it which has been collected from the works of the historians and poets of antiquity, may, perhaps, be objected to by those who would willingly allow them to be competent authorities, for establishing the manners and customs of the different ages in which their authors flourished.



But we have the highest authority in support of the belief, that their testimony, even on the nature of diseases, deserves our closest attention. Sir H. Hallford concludes an *Essay on Insanity*, with the following passage :—“ Thus have some of the descriptions of the poets, held to be imaginary, been realized in life; and it is possible, that if the physician were to collect and apply the brief notices of various diseases which have been thrown out by the great poets of antiquity, he might not only illustrate the truth of the descriptions drawn by those accurate observers of nature, but derive from them some useful hints to assist him in his own observations of disease.”

It must appear extraordinary that the origin of such a horrid pestilence should be enveloped in so much obscurity, and that the researches of so many talented individuals should have led to no other positive

conclusion, than the great antiquity of the disease ; when and where it first appeared, still remain points of doubt and investigation—circumstances which appear destined to elude our closest inquiries.

ON THE SOURCE AND FATALITY OF SMALL-POX, WITH SOME ACCOUNT OF ITS DIFFERENT MODES OF PROPAGATION, AND A BRIEF NOTICE OF THOSE MEANS WHICH HAVE BEEN RECOMMENDED TO MITIGATE ITS SEVERITY, AND TO PREVENT ITS OCCURRENCE.

IT was Dr. Jenner, I believe, with whom the opinion originated, that the source of this disease can be traced to our domesticated animals. The opinion seems rendered probable, rather by striking than by positive evidence. In his inquiry into the causes and effects of the variola vaccina, he says—" May it not then be reasonably conjectured, that the source of the small-pox is morbid matter of a peculiar kind,



generated by a disease in the horse; and that accidental circumstances may have again and again arisen, still working new changes upon it, until it has acquired the contagious and malignant form under which we now commonly see it making its devastations amongst us. And from a consideration of the change which the infectious matter undergoes, from producing a disease in the cow, may we not conceive that many contagious diseases, now prevalent amongst us, may owe their present appearance, not to a simple, but a compound origin? For example, is it difficult to imagine that the measles, the scarlet fever, the ulcerous sore throat, with a spotted skin, have all sprung from the same source, assuming some variety in their forms, according to the nature of their new combinations? The same question will apply respecting the origin of many other contagious diseases, which bear a strong

analogy to each other.” The following passage from Virgil appears singularly striking after these observations of Dr. Jenner.

“ Nam neque erat coriis usus : nec viscera quisquam  
Aut undis abolere potest, aut vincere flammâ,  
Nec tondere quidem morbo illuvieque peresâ  
Vellera nec telas possunt attingere putres.  
Verum etiam, invisos, si quis tentarat amictus,  
Ardentes papulæ, atque immundus olentia sudor  
Membra sequebatur : nec longo deinde moranti  
Tempore, contactos artus sacer ignis edebat.”

There is such an appearance of careful observation in these conjectures of Dr. Jenner's ; they seem to breathe so strongly the true spirit of philosophical inquiry, that, in our present state of knowledge, nothing but regret could follow their clear and decided contradiction. We must acknowledge the deficiency of any positive evidence of their truth, but it seems natural to cling to them in preference to any other

conjectures which have been offered us ; and few, I believe, will feel inclined either to adopt the sentiments of a late distinguished writer, (who appears almost disgusted with the inquiry,) that “ it is evident the small-pox was either coeval with the creation, or had a subsequent beginning ; and it is an inference, deducible from the first principles of reasoning, that the same causes which originally produced, may reproduce it, without contagion ;” or to rest satisfied with the opinion, that the disease is one arising from a specific contagion, which is again generated in the pustules of the disease itself.

It is a melancholy office to record the fatal effects which have occasionally followed the appearance of this epidemic ; its introduction into South America furnishes us with a picture, unparelled as a scene of devastation and misery. Three millions of the inhabitants of that devoted country,



subsequent to its discovery by Columbus, in the space of a few years fell a sacrifice to the pestilence ; and even, as recently as the year 1780, ten thousand persons perished by the disease in the towns of Mexico and Puebla alone. Nor can this favoured country, even since the discovery of vaccination, boast of having been entirely exempted from this “ visitation of calamity.” The disease appeared in Norwich in the year 1807 ; the contagion was quickly communicated to 1,200 individuals, and about one in every six perished.

We have reason to regret that small-pox cannot be classed among those diseases, the virulence of which time appears to mitigate ; it seems occasionally to pass over us, scarcely inflicting punishment, and at uncertain intervals returns as the most dreadful scourge with which mankind can be afflicted. Dr Jenner gives an account of an epidemic small-pox which prevailed in Gloucester-

shire, in the year 1791. He says, “ It was of so mild a nature, that a fatal instance was scarcely ever heard of, and, consequently, so little dreaded by the lower orders of the community, that they scrupled not to hold the same intercourse with each other, as if no infectious disease had been present among them. I never saw nor heard of an instance of its being confluent ; the most accurate manner, perhaps, in which I can convey an idea of it is, that had fifty individuals been taken promiscuously, and infected by exposure to this contagion, they would have had as mild and light a disease as if they had been inoculated with variolous matter in the usual way ;” and yet, two years subsequently, the disease was raging so violently in the Isle of France, that 5,400 persons were destroyed by the malady in the short space of six weeks. Such recitals are truly shocking, but it is our duty to record them ; and to complete the

awful picture, it is only necessary to be familiar with the loathsome sufferings of a person in the advanced stages of the most confluent form of the disease. Those whose pursuits and inquiries are not directed to these points, either by motives of curiosity or duty, will feel surprised at the mortality which this disease still occasions. In London alone more than one thousand persons annually perish.

No climate appears exempt from this destructive pestilence: the extremes of heat and cold do not appear to modify its character; the parching soils of Arabia and Hindostan, and the frozen regions of the north, have equally, by the hand of Providence, been submitted to its ravages. In the year 1707, sixteen thousand persons, one-fourth part of the whole population of Iceland, were destroyed by this malignant epidemic; and we are informed, that in the year 1733, the disease broke out in Green-



land, and nearly depopulated the country. But though the climates of different portions of the world appear to possess no powers of modification, still it seems admitted by all, that the seasons of each climate exert considerable influence on its malignity. Dr. Sydenham, among others, has remarked the comparative mildness of the disease in temperate states of atmosphere, and the practice which has prevailed in Hindostan, of inoculating the disease in the cooler months of the year, appears a striking confirmation of the opinion.

It seems generally admitted, that the small-pox is governed by the same laws which usually regulate epidemic diseases; that a peculiar state of atmosphere is one source of its production. This variolous constitution of the air, and its consequences, are most ably described by Dr. Thomson, of Edinburgh, in his *Historical Sketch of the Small-Pox*. He says—"The general

character of the fever, and the appearances of the eruption in natural small-pox, have been observed to vary exceedingly, not only in particular individuals, but also in different places, and even in the same places, at different times. This fact, which is also acknowledged by every observer of small-pox, has been supposed to depend on a peculiar state of the atmosphere. It has been often remarked, that in some seasons and places the small-pox have been all of a mild kind, producing few deaths, while in other seasons, and in the same or in different places, they have been chiefly of a confluent or malignant sort, occasioning the death of a greater number of those affected with them than is produced even by the plague. In some years the small-pox appears, and is propagated sporadically, attacking only a few individuals; in other years, and in the same countries and places in which the disease had formerly appeared

sporadically, it prevails epidemically, and attacks not only almost all those who have not had small-pox, but also some of those who had previously undergone this disease. In our ignorance of the physical causes which give rise to the local and partial existence, or to the general epidemic prevalence of small-pox, in various seasons and places, we are under the necessity of attributing these differences to some unknown state of the air by which we are surrounded, a state, which, so long as it is unknown, we may continue, I conceive, without any great impropriety, to denominate the variolous constitution of the atmosphere :” it seems also admitted, that the disease may be communicated by contact, by near approach to its object, and by inoculation with the poison which is generated in its progress. One striking consequence appears to follow this latter mode of communication—a decided mitigation of



the disease; the examination of medical records establishes the fact, that there is a most remarkable difference in its fatality, when the malady is produced by a variolous state of atmosphere, and when it is the consequence of inoculation. The average number of deaths in the casual small-pox is about one in every six, while not more than one in sixty perish when the disease is produced artificially. A most inexplicable fact, which can neither be refuted nor explained. What character of disease inoculation would produce during the prevalence of destructive epidemics, it would be a curious point correctly to ascertain; if malignant, should we be justified in the inference, that the inoculated may be regarded as the sporadic disease, the essential character of which is mildness?

It was in the year 1717, that the practice of inoculation first received the countenance and support of the medical profes-

sion : like every other brilliant and useful discovery, it met with decided opposition ; but like every thing which is founded in “just and right well balanced,” it had slowly advanced, and was very generally adopted at the period of the discovery of vaccination. That the practice had existed many years previously among the lower orders of the communities in France, Italy, and Sweden, &c. seems generally admitted, nor is the opinion altogether discountenanced, that as early as the sixth century of the Christian era, the practice was general in Hindostan.

It must be acknowledged that inoculation, though it conferred great individual benefit, yet considerably increased the general mortality of the disease ; the ignorance and prejudices of many, and the supineness on the part of our rulers, in not enacting and enforcing laws for its general adoption, and regulations for the manage-

ment of the sick, rendered every inoculated subject a centre of pestilence and contagion ; but notwithstanding this circumstance, there is reason to believe, had vaccination never been discovered, the practice of inoculation would, in process of time, have become universal.

This disease appears to be communicable to the foetus in the womb ; many instances are to be found on record, and it has been observed that the child may be severely affected, though the mother may suffer slightly, from the disease ; but it was left for the mind of Jenner to originate the following delicate (at least in one sense of the word) and beautiful conjecture, that the disease may pass through the human constitution in every shade of mildness or malignancy. In a paper which he communicated to the Medico-Chirurgical Society, he relates the case of a lady, who “ a few days previous to her confinement, met a



very disgusting object, whose face was covered with the small-pox. The smell and appearance of the poor creature affected her much at the time, and though she mentioned the circumstance on her return home, she had no idea that her infant could suffer from it, having had the small-pox herself when a child. During a few days after its birth the little one seemed quite well, but on the fifth day it became indisposed, and on the seventh the small-pox appeared; the pustules, which were few in number, matured completely. Dr. Croft, who attended her, being curious to know the effect of inoculation from one of the pustules, put some of the matter taken from one of them into the hands of a gentleman eminently versed in that practice, which produced the disease correctly. The lady was not sensible of any indisposition herself from this exposure, nor had she any appearance of the small-pox." Dr. Jenner

remarks, “ This case, then, decisively proves that the small-pox virus may affect the human frame even to its inmost recesses, although apparently secured from its effects, and yet give no evidence of its presence, by exciting any perceptible disorder.” May not this fact be adduced as explanatory of those instances (which we occasionally meet with) of persons resisting the small-pox contagion through a long life? Is it extravagant to suppose that many of them may have regularly passed through the disease previous to their birth? It would be a curious point to ascertain whether some other of the eruptive diseases may not be communicated to the infant in the womb.

To those who were instrumental in introducing inoculation as a mode of preventing the virulence and danger of small-pox, we owe the deepest gratitude, notwithstanding the more brilliant discovery of vaccination

by Dr. Jenner has altogether superseded the practice. It remained for him to propose the infliction of a mild and innocuous disease, as a preventive of one, the striking features of which are loathsomeness and danger. The attention of Dr. Jenner was in early life arrested by a received opinion, (which had existed for years among the lower orders of the community,) that a peculiar disease on the teat of the cow, communicated to man, became a source of security from future attacks of small-pox. We can easily imagine the ardour with which his benevolent mind would prosecute such an inquiry, and almost stand excused in envying him the indulgence of those feelings which awaited its consummation. Difficulties he had to encounter, but obstacles to him could only prove incentives to more careful investigation. It may appear inexplicable, that John Hunter, whose life had been devoted



to the improvement of medical science, should have been cool and indifferent to the suggestion, and that a paper on the subject of vaccination, which Dr. Jenner communicated to the Royal Society in the year 1798, (twenty-one years subsequent to the commencement of his inquiries,) should have been returned to him by a member of that institution with the admonition, “that its publication would diminish his established credit.” We can easily appreciate the annoyance which Dr. Jenner at this moment must have experienced; but confident in the truth and value of his communications, he immediately published his “*Inquiry into the Causes and Effects of the Variolæ Vaccinæ.*” “All uncharitableness” was enlisted to oppose his opinions, but he lived to enjoy the satisfaction of seeing the practice which he recommended almost universally adopted; and his memory will be revered by those who

either place any value on the lives and comfort of their fellow-creatures, or feel any interest, that, in points of science, their country should stand high in the scale of nations.

On perusing the works of Dr. Jenner on the subject of vaccination, we are struck with the maturity of his observations ; scarcely a single fact which he has stated has been contradicted, and it may with justice be said, that not one of any moment has been added to his catalogue. He has perhaps too confidently insisted on the positive security which vaccination affords from future attacks of small-pox ; but the conclusion which he drew, his observations justified, for it is only the experience of the last thirty years that has proved the incorrectness of his position. That this delusion continued long after Dr. Jenner announced his belief, is proved by the following passage from Dr. Willan's Treatise

on Vaccine Inoculation, published in the year 1806. He says, “ But can it be denied that a vaccine vesicle of the most perfect form, after proceeding through the usual stages, has in some persons failed to remove the susceptibility of small-pox contagion ?” He answers, “ If such failures do occur, they must occur in a very small proportion ; and I am convinced that the subjects of them will not be found liable to take the small-pox in the same manner and form as before the vaccination.”

No judicious supporter of this practice would now venture such a positive assertion, nor do I believe that in the public mind any conviction would follow, even though the opinion emanated from the first authorities. There appears no reason for disguise on this point. To acknowledge that severe and fatal cases of small-pox sometimes occur after vaccination, and that a mild disease, which has been denominated



modified small-pox, is of frequent occurrence, scarcely depreciates the valuable discovery of Dr. Jenner. Inoculation is in some degree exposed to the same objections: the disease has recurred after this process, (though not so frequently,) in every form and degree of violence.

Various opinions have been offered, (chiefly by those who assert the infallibility of vaccination,) in explanation of those instances of failure which are upon record; such as,

The imperfection of the vaccine vesicle.

The existence of cutaneous diseases at the time of vaccination.

The deterioration of the vaccine lymph.

The protection afforded by vaccination being only temporary.

On the subject of imperfect vesicles the following observations are to be found in Dr. Willan's publication on vaccine inoculation:—"I have observed three sorts of

these irregular vesicles. The first is a single pearl-coloured vesicle, set on a hard dark red base, slightly elevated. It is larger and more globate than the pustule above represented, but much less than the genuine vesicle; its top is flattened, or sometimes a little depressed, but the margin is not rounded or prominent. The second appears to be cellular, like the genuine vesicle, but it is somewhat smaller and more sessile, and has a sharp angular edge. In the first the areola is usually diffuse and of a dark rose colour; in the second it is sometimes of a dilute scarlet colour, radiated and very extensive, as from the sting of a wasp; the areola appears round these vesicles on the seventh or eighth day after vaccination, and continues more or less vivid for three days, during which time the scab is completely formed, &c. The third irregular appearance is a vesicle without an areola." If such nice discrimination is

really necessary—if the exact tint and complexion of the vesicle, the correct form of its circumference, and the precise extent of the areola are to be the tests of its sufficiency, better had such a practice never have been introduced ; so much tact, taste, and discrimination, is rarely the lot of individuals as would be necessary to enable them to form a correct opinion on the perfections and imperfections of the vaccine vesicle. Under these circumstances, would it not, in every point of view, be preferable either generally to adopt as a mode of practice the criterion of perfect vaccination proposed by Mr. Brice, or to re-vaccinate in the course of a short time ?

With the power that cutaneous eruptions possess of modifying the effects of cow-pox, Dr. Jenner was well acquainted : he communicated to Dr. Willan the following interesting case—“ A child of a gentleman at Blakeney, in Gloucestershire, was at two



years of age inoculated for the small-pox, with others of the same family. In this child there was a deviation from the usual appearances. The arm inflamed and suppurated, but not extensively. Some slight indisposition took place, and a few pimples were scattered over the skin, which did not suppurate. The parents not being quite satisfied, the child was inoculated a second time with small-pox matter, about two years afterwards, when the appearance on the arm, and the disorder of constitution, recurred as at first. Soon after this time the child was put to bed with a person who had a full burden of small-pox, but was not infected. When two years more had elapsed, the child was vaccinated by Mr. Lauder, an experienced and respectable surgeon at Newnham; the puncture produced only an incomplete pustule, surrounded by considerable inflammation. Mr. Lauder then consulted me, and on my making inquiry

respecting the state of the skin, he told me that the child from its early infancy had been affected with eruptions on its head and other parts of the body. Feeling satisfied that he had thus accounted for the preceding circumstances, I endeavoured first to subdue the eruption. As soon as this was accomplished the child was again vaccinated, when a pustule appeared, which went through all its stages with the most perfect regularity."

That the protection afforded to the constitution by vaccination, both against the effects of its own poison and the future occurrence of the small-pox, exists only for a time, has been a favourite opinion with many, and even to this day does not want its supporters. How such a belief can be reconciled with the clear and lucid cases which are recorded by Dr. Jenner in his publications, I cannot possibly conceive. To prove that as a general law the protect-

ing influence of this disease against small-pox is not affected by time, Dr. Jenner, in his “Inquiry into the Effects and Causes of the Variolæ Vaccinæ,” relates the following cases:—John Morrett was inoculated with the small-pox twenty-five years after suffering from the cow-pox without effect. Sarah Portlock was inoculated twenty-seven years after, under the same circumstances, without effect. John Phillips was inoculated fifty-three years after passing through the cow-pox, and Mary Barge thirty-one years; both of them resisting the disease.

That the cow-pox does not invariably protect individuals from the future effects of its own poison was also his belief; the following statement is to be found in the publication last mentioned:—“Although the cow-pox shields the constitution from the small-pox, and the small-pox proves a protection against its own future poison, yet it appears that the human body is again and again



susceptible of the infectious matter of the cow-pox, as the following history will demonstrate:—William Smith, of Pyrton in this parish, contracted this disease (the cow-pox) when he lived with a neighbouring farmer, in the year 1780. One of the horses belonging to the farm had sore heels, and it fell to his lot to attend him. By these means the infection was carried to the cows, and from the cows it was communicated to Smith. On one of his hands were several ulcerated sores, and he was affected with such symptoms as have been before described. In the year 1791, the cow-pox broke out at another farm, where he then lived as servant, and he became affected with it a second time; and in the year 1794, he was so unfortunate as to catch it again. The disease was equally severe the second and third time as it was the first.” Dr. Jenner also relates the following case:—  
“ Elizabeth Wynne, who had the cow-pox

in the year 1759, was inoculated with variolous matter without effect, in the year 1797, and again caught the cow-pox in the year 1798. When I saw her, which was on the eighth day after she received the infection, I found her affected with general lassitude, shiverings, alternating with heat, coldness of the extremities, and a quick, irregular pulse. These symptoms were preceded by a pain in the axilla. On her hand was one large pustulous sore," &c.

The probability that the vaccine virus may lose its properties in passing through so many individual constitutions, is a point of the deepest interest. Dr. Jenner describes the effects of vaccination with virus taken from the animal in the following words :—" Absorption takes place and tumours appear in each axilla. The system becomes affected—the pulse is quickened—and shiverings, with general lassitude and pains in the loins and limbs, with

vomiting, come on. The head is painful, and the patient is now and then affected with delirium." It is impossible to recognize in this description any resemblance to the effects of vaccination at the present time. The indisposition which now follows the practice is so slight as scarcely to be noticeable. A trifling degree of restlessness appears to be its greatest inconvenience. Even this point Dr. Jenner had in view: he vaccinated individuals from each other, (remarking at the same time the comparative mildness of the constitutional disturbance,) and found them afterwards incapable of being affected by variolous inoculation. But though the vaccine virus may retain all its original power, in passing through the constitutions of many scores of individuals, it does not necessarily follow, that its properties will remain the same after having passed through as many millions. Dr. Gooch has the following



passage in his essay on the contagious nature of the plague. "The vaccine matter fresh from the cow, produces a more painful disorder, than after it has passed for some time through the human subject by inoculation ; and if vaccination be now less effectual than formerly, as a preventive of small-pox, it may be because we have neglected too long to vaccinate with matter taken immediately from the animal."

As I observed before, this is a point of the deepest interest ; in the conjecture too, there is nothing repugnant to common sense ; no vain or fanciful delusion, the mind rests satisfied with its probability ; and laments the difficulties that prevent our establishing the point, on the basis of experience.

I feel anxious to be clearly understood, and therefore repeat, that I consider the discovery of vaccination by Dr. Jenner to be the most brilliant ever made, since

medicine was enrolled in the list of sciences ; that notwithstanding its imperfections, we ought to regard it as one of those blessings which the hand of Providence has bestowed, and to believe, that it remains to us a point of conscientious duty to investigate the sources of its failure. I feel strongly this necessity, as my own experience would declare that during the prevalence of mild varieties of small-pox, the occurrence of modified cases, after vaccination, is very frequent ; so frequent, indeed, as to make it a subject of anxious conjecture, whether the vaccinated would escape with such impunity, during the prevalence of a malignant and fatal epidemic.

## ON THE CONSTITUTIONAL AND LOCAL TREATMENT OF CONFLUENT SMALL-POX.

WHEN we consider the intimate connexion which exists between the surface and the internal parts of the human body, and reflect how the vital functions are often impaired, and even destroyed, by comparatively slight injuries and diseases of the former; we cannot feel surprised, that in cases of confluent small-pox, the constitutional disturbance should very generally assume a most malignant and unmanageable character. The innumerable suppurating processes going on, the exposure of large portions of such a very important texture as the cutis, with the consequent



pain and suffering, are circumstances which, on reflection, would rather lead us to feel surprise that any of its objects should escape, than that the mortality of the disease should be so considerable. I am induced from observation to believe, that in the management of the local features of this complaint, in a great degree, depends the security and comfort of its victims. That the phenomena presented to us in the different stages of confluent small-pox, are such as exhausting processes, and continued bodily suffering, would under any circumstances uniformly produce, and consequently doubt whether this tumult, or, to use another phrase of Sydenham's, this ebullition in the constitution, is not referable to the nervous, rather than to the vascular system, and whether it bears the genuine stamp and character of fever.

This opinion does not appear to lead to any useless dispute, to any inquiry which is

merely to satisfy the desire of information in the *curious* ; but to an important practical conclusion, in which the welfare of the victims of this disease is most deeply implicated. He who would regard the aggravation of suffering, in the secondary stage, as fever, would naturally withhold those medicated remedies, and “appliances to boot,” which would, without hesitation, be had recourse to by him who considered the phenomena which the different stages of confluent small-pox present, as the result of irritation and distress. The rapid and irregular actions of the heart, &c. would be referred to with equal anxiety by both ; but the one would regard them as symptoms requiring control and management, the other would determine, that, like “a bold swimmer in his agony,” they demanded every assistance and support. I must confess I feel some regret in acknowledging, that this opinion possesses no claim to ori-

ginality ; but I feel every confidence in it, from being enabled to adduce the evidence of such an accurate observer of disease as Dr. Fordyce in its support. How anxious he was to separate from the class *Pyrixiæ* those diseases which do not bear its character, is evident from the following observations, and it is reasonable to conclude that he was fully impressed with the importance of doing so.

In the first dissertation on simple fever, Dr. Fordyce remarks, (page 19,) “Many diseases have been called fever, even by practitioners of great knowledge, which the author does not mean to include in the number of fevers. In the first place, he excludes all affections of the system which depend upon any other disease. Thus, in phlegmonous inflammation, in pleurisy, for instance, there is often frequency of the pulse, greater strength of the pulse, and hardness, foulness of the tongue, and loss



of appetite, and want of sleep. If the inflammation be carried off, all these appearances subside of themselves ; they only depending on the inflammation of the pleura, and therefore are, according to this rule, not to be considered as fever. So in inflammation of the intestines, there is frequency of the pulse, with hardness, contraction, and frequently obstruction, pain in the forehead, dryness, and dusky colour of the skin ; the tongue is covered with a brown fur, with great depression of muscular strength, convulsive contractions of the extremities, nausea, and vomiting, and costiveness, &c. If the inflammation of the intestines is carried off, these appearances all go off, they depending entirely upon the inflammation of the intestines, and therefore, according to this rule, cannot be considered as fever. In erysipelatous inflammation, all the last enumerated symptoms may arise. This inflammation may

be cured by the application of alcohol, diluted with water, and all the symptoms affecting the other parts of the system disappearing, they cannot be considered as fever." At page 21, Dr. Fordyce remarks, "So in rheumatism affecting a particular part, or taking place in various parts by metastasis ; it happens frequently, that the pulse becomes hard, full, strong, and frequent ; the tongue is covered with a white crust, loss of appetite, great increase of all the symptoms in the evening, and relaxation in the morning ; but these all depend upon the rheumatism affecting particular parts of the body, and if all the topical affections should be carried off, then these appearances, which have been enumerated, likewise subside, and are not, therefore, according to the rule laid down, a fever." I cannot refrain from borrowing still further from the works of this inestimable author ; in the same treatise, page 127, he observes :

“In the small-pox, if the infectious matter be applied to a wound, an inflammation is produced in that wound, in consequence of which a fever arises; if the poison of a bee be infused into a wound made by the sting of the animal, or if the poison of any other animal be injected into a wound by its sting or tooth, an inflammation arises in the part where the wound is made, and that inflammation produces affection of the whole system, some of the symptoms of which may be similar to fever, but are not the disease intended to be described here by that name. It might happen that a great inflammation might be immediately produced in a wound into which variolous matter was infused, that such an inflammation may produce affection of the whole system in a day or two afterwards; yet that affection is by no means to be called fever, which takes place, being only induced after the suppuration of the wound is com-



plete, which is on the seventh or eighth day. It is also to be observed that when, in consequence of a fever, produced by infectious matter, some topical inflammation arises, and the fever is carried off by it, that such topical inflammation as in the small-pox produces affection of the system, in which some of the appearances are similar to some of the appearances which take place in fever: such affection of the system has frequently been called fever. In the small-pox, for instance, such affection has been called secondary fever, although it in no way has any thing of the essence of the disease."

Though this opinion has been tacitly acknowledged by many, still there is no doubt that a large majority of the profession, comprising many even of the intelligent amongst us, would maintain the contrary. If we refer to all published records of this disease we shall find the belief uni-

versal, that fever is its essential character. Dr. Cullen, to whose opinions on the nature and management of most diseases I should feel inclined with every deference to submit, in “the First Lines of the Practice of Physic,” observes; “When the secondary fever first appears, whether it is after distinct or a confluent small-pox, it will be useful to exhibit an antimonial emetic in nauseating doses, but in such manner as to produce vomiting.” In this instance the opinion is not only clearly stated, but a mode of practice, as a natural consequence, recommended, which would immediately be pronounced as highly dangerous by those who classed these phenomena among the nervous affections. This remark, I believe, will apply to every medical authority which we have to appeal to as a guide; not only antimonial emetics, but bleeding, purging, &c. are pointed out as our resources to combat a train of symptoms, which I cannot but regard as partly the result of our own mis-

management in the early stage of the disease, and in a great measure the effect of that tremendous call, which at this period is made, not only on the powers of the constitution, but also on the equanimity of the mind. It is true, that the above remedies are reserved by their proposers for the inflammatory forms of the fever, and their application cautiously recommended : but if there be any truth in the foregoing observations, we have not the malady termed fever to contend with ; and it is a serious reflection, but it necessarily follows, that the adoption of any active mode of treatment could only tend to shorten existence ; and that treatment which the fever, when decided to be of a typhoid character, would demand and meet with from the judicious, could at best only leave the disease and the constitution to contend for the mastery.

I must again repeat my belief, that it is of the highest importance this distinction



should be made—have we or have we not fever to contend with? The following remarks on those anomalous affections which follow injuries and operations, &c., (and with which I would associate the general disturbance in confluent small-pox,) in Mr. Travers's work on constitutional irritation, clearly point out his belief in the danger which attends the medical practice, grounded on the opinion that fever is the essence of those diseases. He says, “I am disposed to consider apart from fever or constitutional inflammation, the nervous affections, to regard them as a distinct order of morbid actions, occasionally ensuing upon injuries, upon inflammation, upon the exhaustion attending loss of blood, and upon the admission of *noxious matters into the circulation*. I do not mean to say that such actions originate exclusively from these sources; but I select these as presenting prominent examples.

Neither would I say that they may not be combined with febrile action; but if this be the case, they so far pervert or suppress the symptoms of fever, as to present a very striking exception to Mr. Abernethy's observation — 'that sympathetic fevers are indistinguishable from those not depending on injury.' It will not, I think, be denied by experienced surgeons, that there is a large and very important class of cases in which neither the assemblage of symptoms, nor the periodical exacerbations and remissions constituting fever are present, and which, if we treat them in deference to the rules laid down for the treatment of fever, utterly disappoint and mock our efforts."

Among the reasons which lead me to suppose, that in fatal cases of small-pox, the result is attributable to the incapability of the powers of the system, to complete the various exhausting, and to endure

the painful processes which are going on, are these: first, and chiefly, the experience that in these cases a mode of treatment may be adopted with the greatest advantage, which would be found to be highly injurious in any of the forms of fever; and secondly, the absence of one of the most distinguishing characters of fever, the suppression of the different secretions. Dr. Fordyce observes, (p. 51,) “Diminution of secretion takes place in fever in every part of the body.” Again, (p. 64,) “The whole secretory vessels throughout the body, secrete a smaller quantity of fluids.” Again, (p. 65,) “There is a smaller quantity of feculent matter evacuated from the intestines.”

From my own experience I would venture to assert, that in the different stages of small-pox, none of these appearances are to be observed. The kidneys (if we do not treat the disease as febrile) act plentifully,



the bowels require very trifling assistance to procure the most satisfactory relief, and the appetite, depending of course on the secretion of the gastric fluid, becomes almost voracious, if our medicated remedies in the early stages of the disease are selected with the view of tranquillizing the system, and at the same time sustaining its powers. I have already expressed a belief that the formidable symptoms in the advanced stages of this disease are partly to be attributed to our own mismanagement at its commencement. One important consequence of strictly treating this malady as fever in its early stages, is to deprive the patient of this very appetite. This effort of nature to support him under the severest of trials—this resource is totally or partially subdued by our very remedies, and the nourishment which is permitted in no way tends to mitigate the evils; the stomach is well known to possess

a power almost magical, over every portion of the body : the state of discontent above-mentioned aggravates the constitutional disturbance, and a series of diseased actions in the latter stages of this malady are, by the advocates for the existence of fever, again aggravated by the employment of the very remedies which have in some degree contributed to produce them. If we have not fever to contend with, I believe that rule of conduct would be most excellent, which would seriously warn us to beware of offending this organ (the stomach). An author before referred to remarks—"The effects of its disorder are more rapidly and more sensibly diffused over the system than those produced by the disorder of any other, as is seen in the direct debility of the nervous, vascular, and muscular systems, ensuing upon sea qualms, and the introduction into the stomach of nauseating medicines and indigestible food ; hence the

stomach has been named the centre of sympathies."

I cannot conceive myself called upon, even though contemning the practice of others, to recommend any specific remedies, as peculiarly adapted to these cases. I feel that every thing which is necessary is done, in expressing my belief, that it is neither from that class of medicines, the effects of which are to weaken and subdue the powers of the system, nor from that scale of diet which is necessary when our object is to keep in check the inflammatory diathesis, that we are to look for assistance, but to a judicious selection of those remedies and of that system of diet which are best calculated to soothe and allay the disturbances, based in debility, which are met with in this disease. The cases which are subjoined faithfully describe the mode of treatment which I adopted ; and I feel willing to acknowledge



that this is yet “an uncultivated if not untrodden field for intelligent observers.”

I have made no allusion to those inflammatory affections (particularly of the chest and throat) which are sometimes said to be the result of small-pox. I have no doubt that morbid dissections have presented the destructive changes which have been described, but I would (to use the language of Dr. Gooch) say in answer, “that symptoms and dissections cannot settle such a question.” It must be, that the blood-vessels are employed, in working these destructive alterations; but how far their actions are dependent upon nervous causes, appears an inquiry of the deepest interest. I feel disposed to attribute them to the effects of irritation, and are most likely to be prominent features in severe cases of this disease, where our mode of treatment has aided the mischievous tendency of the malady, instead of soothing the general disturbance

into quiet. From experience I would declare, that whatever symptoms may have hitherto presented themselves, as features of this disease, in its latter stages, that neither general nor local bleedings, &c. are their remedies; I speak from observation and experience, and from the effects which, under these circumstances, remedies produce. The very physiognomy of this disease also—that source of information to us which Dr. P. M. Latham so ably insists upon in the following passage, gives this opinion no trifling support. He says, “ Let me also mention the physiognomy of disease; this can never be adequately described: I urge you always to remark it, and to dwell much upon it; for some acute observers have drawn such secrets from the expression of the countenance, that they have been to them in the place of all other symptoms.” In these wretched cases the expression of the countenance

may certainly be lost, still the general appearance, every action, every expression of the sufferer indicates, that his strength and fortitude are taxed to the uttermost,

“ Making night morning, and the noontide night;”

that so far from attempting to subdue the apparent inordinate and irregular actions of the heart by violence, I believe it to be our duty to sustain, nay, under circumstances, even to *propel* the rapid and irregular motions of the arterial system, in order to their being equalized.

That such modes of judging of diseases are in no way allied to empiricism is almost established by the following quotation from Dr. Gooch. He says, (p. 37,) “ The effects of remedies on a disease, if accurately observed, form the most important part of its history ; they are like chemical tests, frequently detecting important differences in objects which previously appeared exactly similar. How many diseases are there in



which the symptoms are inadequate guides, in cases apparently syphilitic and apparently similar ; some, as soon as mercury affects the mouth, begin to mend and rapidly recover ; in others, the ulcers begin to spread, and so imperfect are the appearances as guides, that I have known the first surgeons in the profession giving opposite opinions, and a nose lost by taking the opinion of the majority."

I have expressed a belief, that from a local treatment of this malady the greatest advantage may be derived. In three papers which were inserted in the London Medical Gazette, I described the apparent good effects which followed the application of calamine as a local remedy in cases of confluent small-pox ; such local treatment, I still believe, will not only prevent the process of ulceration, but will always rescue the sufferer from an infinitude of misery, and very frequently from a state of the

greatest peril. The treatment consists in covering the body as completely as possible with any absorbent powder, (I have generally used the calamine;) the advantages which follow the use of this dressing in the early stage of this disease, are, to moderate the violence of the local inflammations, and to prevent the painful tumefaction of the common integuments. After the calamine has been applied some hours, a very sensible difference is to be observed in the appearance of the parts so covered; the areola of each pustule being much less distinctly marked. It is not unreasonable to suppose, that even at this moment some advantage is gained by the application; the quantity of pus secreted may by this circumstance be diminished, and a great saving made of the powers of the constitution; but it is in the advanced stages of this disease that the greatest benefit is derived from this method of local treatment,

particularly at that period which Sir Henry Hallford, in his *Essays and Orations*, points out as being eminently critical. In the essay entitled, “On the Necessity of Caution in the Estimation of Symptoms in the Last Stages of some Diseases,” it is observed, that “The physician may fairly acquiesce in the fears of a family, when, on the completion of the eruption, he sees the face and breast one mass of disease, and may most reasonably doubt the capability of the constitution to mature and perfect so large an eruption. But he must not hold out unfounded hopes to the parents, if the malady proceeds in the next stage, in a most satisfactory manner, beyond his expectations ; the pustules ripening fully, and the process being complete ; for, alas ! at this very moment, it may be, the patient is sinking—is dead. The powers of his constitution being exhausted by the efforts it has made, and no longer equal to the ac-



complishment of a protracted cure." At this crisis, too, in addition to the source of danger above-mentioned, might well be added another of the greatest magnitude; viz. those large portions of exposed cutis which about this time are torturing the sufferer beyond endurance, rendering his situation so truly horrible that to exclaim—

*Dî meliora piis, erroremque hostibus illum,*

would be almost justifiable.

As I said before, it is at this moment we have it in our power not only greatly to circumscribe the field of suppuration, but to heal, on destroying the cuticle, by the process recommended, every pustule on the body, almost in the space of a few hours. At such a crisis what an immeasurable advantage is gained by the exercise of such a power! the drain on the constitution may thus at our discretion be partially or completely closed. To accomplish this, is indeed, as I have experienced, a disgusting

and painful task ; but what difficulties will not with alacrity be encountered by the hand of duty or of friendship. By the same process, those extensive portions of exposed cutis may be rapidly healed ; exclude them also from communication with the atmosphere, and they soon cease to be sources of irritation. I have seen patches of exposed cutis, six or eight inches in diameter, at the end of two or three days, by this treatment, no longer occasioning disturbance. If no other benefit followed than the mere relief from pain, great must still, by every feeling mind, be thought the advantage ; for it is impossible to imagine the agonizing sufferings of the patient, from this circumstance. I have often seen every nerve of the body quivering with distress on the slightest exertion, and have as often witnessed the firmest mind sinking into a state of almost childish weakness, from the extremity of the sufferings.

It has frequently happened, particularly in medical science, that the most valuable discoveries and observations have been completely lost to us by time and circumstances. If there be any truth in the remarks which I have made on this disease, this opinion receives ample confirmation from the fact, that in the most ancient treatise on this malady extant, written at some period in the tenth century, are preserved many of the opinions of an author who flourished three centuries before. Alluding to the local treatment of the disease, this author observes, “ When the pustules are suppurated, the patient is to lie upon flour of rice and be fumigated with myrtle and olive-leaves, which will *dry* them.”\*

\* I trust I shall be believed in asserting that I was unacquainted with this advice of Ahron's, until the advantages which I immediately perceived were derivable from such a mode of treatment, led me to consult the best authorities on the disease.



Such are the remarks of Ahron, an Arabian writer of the seventh century. Rhasis, to whom we are indebted for a knowledge of these opinions, may perhaps in some degree have contributed to their neglect ; like all the ancient physicians, the local treatment of this malady he considered an important feature in its management. The variety and absurdity of many of the applications which he recommended have, in all probability, in a great measure contributed to their general disuse. The following summary of his mode of local treatment is taken from Mr. Moore's History of Small-pox, p. 133 :—“ Fomentations and fumigations are likewise directed for the body, and *oils*, with *salt* and *alum*, to be applied. On *some occasions* the patient is to lie on a bed strewed with flower, or with rose-leaves ; on other occasions, iris-leaves are to be placed under him, and the body to be sprinkled with an

aromatic powder, composed of aloes, frankincense, and other gums; these and many other applications are to prevent pitting." Such are the complicated and absurd applications recommended by a physician, who flourished three centuries after Ahron: from whom we received those clear and explicit directions conveyed in the following words:—"Et cum sunt digestæ (the pustules) jaceat patiens super farina rîzis et fumigetur cum foliis myrti olivarumque et *desiccabuntur*."

How little this mode of local treatment has been valued, or its consequences appreciated, is made evident, by a reference to all modern publications on this disease. Mr. Moore, in his History of Small-pox, concludes a chapter which relates to the general and local treatment of the disease which the ancients adopted, in the following words:—"How singular! that almost every attempt made by these learned men

to do good, must have done mischief. It was ages before it became established practice to leave the pustules to themselves; for to do nothing is frequently the last improvement made by physicians." Even our systems of physic, which are supposed to contain not only the opinions of their authors, but also the established opinions of the day, observe a perfect silence on this point. Dr. Cullen, in his "First Lines," makes no other allusion to any plan of local treatment than what the following paragraph contains:—"For avoiding the pits which frequently follow small-pox, many different measures have been proposed, but none of them appear to be sufficiently certain."

Thus it appears, that to heal the pustules of small-pox, by the application of any absorbent powder, was the practice of the Arabian physicians in the seventh century. That in the tenth century the intention



was not altogether forgotten, though it was complicated with such absurd, and even cruel modes of treatment, as could only tend to throw the practice into disrepute, and that the physicians of the few last centuries have never practically noticed this valuable hint given to us by Ahron, and appear totally unacquainted with the command which the exercise of such a power gives us over the most distressing and dangerous features of the complaint.

## RECAPITULATION.

THUS in confluent small-pox I believe it to be fraught with dangerous consequences, to characterize the constitutional disturbance as fever, as I consider that antiphlogistic remedies are, from the commencement, positively contra-indicated. That the action of the arterial system in this disease requires to be sustained, in order to its being equalized, and that any increased excitement in the progress of the malady, is to be combated upon this principle, and not encountered by the use, or any modification in the use, either of the lancet or its equivalents.

I cannot be understood to say, if called

upon to attend a case of small-pox at its commencement, in which I found the pulse strong, and contracted, &c., together with other marks of the existence of an inflammatory diathesis, that I would not bleed; such cases I should regard as exceptions to the general rule, and I believe, seldom, if ever, to be met with; but even in such instances, I should still proceed with the utmost caution, and keep a clear remembrance in mind of the general character of the disease; for brief, very brief, in my opinion, are the moments in which we can, with any degree of safety, have recourse to evacuants of *any kind*.

On the comparative merits of different medicines, I have not pretended to have arrived at any positive conclusion; those which I selected are mentioned in the cases detailed at the end of this work, and that others might be chosen from the same class, which would be found equally, if not



more efficacious, I am willing to acknowledge. That to cover the surface of the body, on the commencement of the disease, is to prevent the painful tumefaction of the common integuments, and in no trifling degree, to control the violence of the local inflammations; that when the pustules are fully ripened, you may, by partially destroying the cuticle of each, completely heal them; the attached cuticle shrivelling and in a few days falling off, leaving the skin perfectly smooth, that unless the surface is again covered with the powder, an incrustation forms on the site of each pustule, which on being removed exposes a slight depression, that I have strong reason to believe in time wears away. That where from neglect of this practice at the commencement large portions of exposed cutis are to be met with, they also may be healed in the space of a few hours, or at least completely deprived of their *sensibility* by this

application. That the advantages attendant on this mode of local treatment are,

1st. It entirely prevents the seaming or scarring of the skin.

2ndly. If it does not altogether prevent the pitting, it renders it comparatively trifling.

3rdly. It rescues the patient from those sources of danger to which, from the eighth day, he is exposed; the consequences of the powers of the system being in a great degree exhausted, though distressing processes still require completion: and from being subjected to those agonizing sufferings which an exposed cutis uniformly produces, that in truth at this moment he is rescued from a condition which I believe has occasioned the destruction of thousands of our fellow-creatures.

Thus have I concluded these imperfect observations, leaving it to others, or my own opportunities, to modify or extend

them. To the question, Why not await their maturity? I would answer, a length of time must from circumstances elapse before such could be the case. In the interval (if there be any truth in them) lives must be lost, and unnecessary sufferings endured, which might perchance be spared or alleviated by their publication; and I am free to acknowledge,

“ I do not love to see misery o’ercharged.”

Intellects, too, more cultivated, and minds more acute and more observant than my own, might perhaps assist in giving to them a “ Local habitation and a name.” Believing in their truth, and almost fearing the correctness of the following observation, that

“ What in the captain’s but a choleric word,  
Is in the soldier downright blasphemy,”

I feel satisfied in having accomplished a task which duty dictates, in having done



“ As you have done, that’s what I can ; induced  
As you have been, that’s for my country ;  
He that has but effected his good will  
Hath overta’en mine act.”



## C A S E S

ILLUSTRATING OPINIONS CONTAINED IN THIS WORK;

PUBLISHED IN THE LONDON MEDICAL GAZETTE.

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*To the Editor of the London Medical Gazette.*

SIR,

THOUGH since the introduction of vaccination, small-pox has ceased to be the general scourge it was formerly, still instances of that loathsome disease occur occasionally ; and it must be satisfactory to the profession to be in possession of an expedient which may deprive the disease of half its ill consequences, by preventing its disfiguring effects. It may be a satisfaction, and perhaps an argument in favour of vaccination, to know, that even inoculation itself will occasionally fail, in protecting a person from a recurrence of the disease in its most virulent form.



As the subject of the present paper, though he had been inoculated in his infancy, took the disease, I trust that the experience of others will confirm the following statement. It is not my intention to enter into a detail of the constitutional management of the case, but to explain the manner in which the disease was treated locally, and with what consequences.

About the tenth day, my patient (aged twenty-four) was much exhausted by his disease; the cuticle, from adhering to the bed-clothes, was abraded to the extent of six or seven inches on each hip, and to the same extent in each ham and on the back. I covered the exposed surfaces, and kept them constantly covered with the prepared calamine. In four days at farthest the cuticle was every where restored, the pulse became quiet, the appetite returned, and the man recovered more rapidly than usual. There is not a single pit to be observed on those parts where the cuticle was so extensively removed, and even the immediate surrounding pustules, which unavoidably were covered with the powder, have not destroyed the cutis. I will not

pretend to say that any very elaborate train of reasoning led to the adoption of this plan, nor will I admit that it was adopted without reflection. I have frequently thought that any successful mode of local treatment would disarm the malady of half its loathsomeness, and, as a consequence, would control the constitutional disturbance. The immense surface of exposed cutis, the discharge, the exquisite sensibility, all reminded me of the appearance and effects of a scald; and, reasoning by analogy, I tried the same mode of treatment with the good consequences above stated.

H. GEORGE,  
Surgeon.

22, Lower Phillimore Place,  
Kensington.

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*To the Editor of the London Medical Gazette.*

SIR,

THE subject of the present paper is a little girl in Kensington Workhouse, aged seven years.

After struggling severely for two or three days, the eruption appeared. On the third day of the eruption, I first saw her; it was confluent on the face and many parts of the body; and where the eruption was most distinct, the pustules were very numerous. I punctured many of them with a lancet, and covered them with the calamine. On the following day, April 26th, I found the pustules had filled again; the constitutional disturbance was very great. With a pair of scissors I imperfectly removed the cuticle from many of the pustules, and again applied the calamine.

April 27th.—The child is suffering severely from the disease. Wherever the cutis had been exposed, and covered with the calamine, a scab had formed; but in each pustule the cuticle that remained had attached itself to the cutis, forming pustules, of various size and form, filled with lymph; and most of them, where the cuticle, from the shape of the pock, had only been removed in the centre, formed a pustule, with healthy cutis in the middle, and went on to ma-



turation: one large pustule, being entirely abraded of its cuticle, has healed, and left the skin perfectly sound.

28th.—From many of the pustules I again removed the epidermis, and covered them with the calamine, also directing that the powder should be constantly applied to the whole arm, leaving the pustules undisturbed; observing that those in the neighbourhood of the part where I had destroyed the cuticle had lost the efflorescence which surrounded their base.

29th.—Child tolerably well; all the pustules which were destroyed yesterday have put on the same appearance as described on the 27th; the efflorescence surrounding the base of each pustule much less distinct.

30th.—The efflorescence surrounding the base of each pustule on the arm on which the calamine was applied, has entirely disappeared.

May 1st.—The child going on well; many pustules and confluent patches were dressed yesterday by the mother of the child, with this

different result—the scab has formed as usual, but the remaining cuticle, instead of forming irregular-shaped pustules, is shrivelled, but as yet is attached to the cutis.

3rd.—No suppurative process is now going on on any part of the body, excepting on the hands and on the soles of the feet, where the pustules are allowed to proceed undisturbed: the child has slept soundly through the night; her appetite has returned.

4th.—The child convalescent, with craving appetite.

9th.—The child continues well; many pustules still remaining on the soles of the feet and on the hands.

13th.—The child continues well; some pustules are still remaining.

From the above statement it should appear, first, if you carefully remove all the cuticle of the pustule in its early stage, and apply the calamine, you completely arrest its progress; and if any portion of the cuticle remains, that it attaches itself to the cutis, forming an irregular-shaped pustule, which goes on to ma-

turation: does this argue the vitality of the epidermis?

Second. The effect which the calamine had in completely effacing the efflorescence from the base of each pustule, would lead me, on any other occasion, to apply it over the whole surface of the body, from the commencement of the disease, in the hope that, from its controlling the violence of the local actions, the disease would not only be mitigated, but that the expedient would also assist in preventing the destruction of the cutis. I am inclined to believe that nothing but the tediousness of the process would prevent our arresting the malady at the very commencement; for I cannot but consider this disease as strictly local in its character—as a disease, in fact, of the skin; that the constitutional disturbance presents throughout the phenomena of constitutional irritation; and that the aggravated disturbance which occurs about the ninth or tenth day, and which has been hitherto denominated the secondary fever, is merely an increase of constitutional suffering from a continuance of local irritation. What a striking

instance of the effects of bodily pain (without any extensive suppurative process going forward) on the various functions of the body, has Mr. Travers given us in his last publication; and I believe I cannot do better than conclude by quoting, from the first section of his third chapter—that “pain, when amounting to a certain degree of intensity and duration, is of itself destructive.”

I am, Sir,

Your obedient servant,

HENRY GEORGE,

Surgeon.

Kensington, May 13th, 1831.

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*To the Editor of the London Medical Gazette.*

SIR,

IN communications which I made to you a few months ago, I expressed a belief that the aggravation of disease, which in cases of confluent small-pox occurs from the ninth to the twelfth day, is attributable to the demand made on the



powers of the system for the completion of the extensive suppurating processes going on, and the irritation produced by the exposure of large portions of the cutis to atmospheric influence : the following case, which I offer for insertion in your Gazette, though fatal in its termination, appears to me to corroborate the opinion.

John Grimsley, aged forty, on the 16th of February was seized with rigor and sickness, &c. : on the morning of the 18th an eruption appeared on his forehead and limbs ; he was removed to Kensington Workhouse : on the 21st I first saw him : the face was much swollen, and covered with the eruption of small-pox, in the confluent form, over the whole surface of the body, excepting the abdomen : the pustules were innumerable ; large, livid patches of eruption were to be seen here and there. Such was his general appearance. His bowels were soluble ; his urine plentiful ; his mind collected ; pulse 110 ; his throat dreadfully sore, swallowing with the greatest difficulty. With the view of ascertaining whether the swelling about the face would be diminished by the application of the

calamine, I covered with it the forehead and one half the face, and ordered the following medicines; allowing him for diet, milk, tea, broth, &c. and at his earnest request half a pint of porter.

R Liq. Ammon. Acet. ʒiss. S. Æther. Nit. ʒiij. Sp. Amm. comp. ʒiss. Tr. Hyos. ʒij. Mist. Camph. ʒiiiss. M. ft. Mist. 4tam. part. 6tis horis.

R Hyd. Sub. gr. ij. P. jalap. gr. viij. M. ft. pulv. h. s. s.

22nd.—Where the calamine is applied to the face, the swelling is much diminished; the tongue is covered with pustules; pulse 116; expresses himself confidently; the powder operated violently; great flatulence in the abdomen, with distention; urine plentiful; great discharge of viscid saliva; frequent cough. Allowed him in addition a glass of wine.

Rep. Mistur. cum addit. Conf. Arom. Div.

R P. Ipecac. comp. gr. x. ft. pul. h. s. s.

23rd.—Passed a comfortable day yesterday, taking plenty of nourishment; his night was very restless,—was delirious; fell asleep, and is now collected and composed. The face one

mask of eruption ; but that portion covered with the calamine much less swollen ; urine plentiful ; pulse 120.

Rep. Mist. sed add. Amm. Carb. ʒss. loco Sp. Amm.  
c. Pulv. Laxat. h. s. s.

24th.—Passed a tolerable day yesterday, but his night was very restless, delirious, but again fell asleep towards morning, and is now collected and composed. The whole body since yesterday has been kept covered with the calamine ; bowels twice relieved ; gave him an additional half-pint of porter.

R Amm. Carbon. ʒj. ; Sp. Æther. Nit. ʒss. ; Tr. Hyoscyam. ʒij. ; Tr. Cinch. Comp. ʒss. ; Decoct. Cinchon. ʒivss. Mr. ft. Mist. cujus cap. 4tam. part. 6tis horis.

25th.—Passed a comfortable day yesterday ; slept the whole night ; appears in every respect better ; the confluent patches of eruption noticed in the early stage of the disease not to be observed now ; the parts are dry and florid.

Cont. Mistur.

R Liq. Opii. Sed. gtt. xx. ; Inf. Rosæ, ʒx. ; Tr. Card.  
c. ʒj. M. ft. L. h. s. s.

26th.—Going on well; the cuticle of each pustule appears thickened, and little pus to be found in any of them.

Contin. Mistur. et haust. Anod.

27th.—Passed a comfortable night; is tranquil and composed, *complains* of hunger, but is incapable of swallowing any thing but liquids; a hurried attempt to drink a wine-glass of porter nearly produced suffocation; from the effort an incredible quantity of viscid saliva was discharged, which enabled him to swallow with comparative comfort. Pulse quick and weak; urine plentiful.

Contin. Medic.

28th.—Slept almost the whole night; general appearances as yesterday.

Rep. Mistur.

R Decoct. Aloes c. ʒx.; Tr. Sennæ ʒiss.; Sp. Æther. Nit. ʒj.; Aq. Puræ ʒij. M. ft. L. mane primo s.

29th.—Slept well; no swelling of the extremities; bowels relieved; every broken pustule on the body healed; (the calamine has been constantly applied;) expresses himself confi-



dently ; urine plentiful ; appetite good ; pulse quick and weak.

R Ext. Cinchon. ʒij. Ammon. Carb. ʒj. Tr. Hyos.  
 ʒij. Decoct. Cinch. ʒv. Tr. Cinch. c. ʒss. M. ft.  
 Mist. Cap. 4tam part. 6tis horis. Rep. Haust.  
 Anod. Lax.

30th.—Going on well ; is collected ; pulse quick and weak ; no relief from the bowels ; gave an injection.

Contin. Mistur.

March 1st.—Slept almost the whole night ; complains of hunger, but is unable to gratify it. Pulse quick and weak ; mind steady ; every broken pustule is healed. With a pair of dissecting forceps, I was two hours engaged in separating the cuticle from the pustules : this might have been done some days ago, but I shrunk from the task. Twenty-four hours' such labour would, in all probability, have destroyed every pustule on the body : such a proceeding requires a very friendly or a very mercenary hand.

Contin. Medic.

P.M.—No relief from the bowels since the

29th. Gave an injection, and ordered the usual laxative draught to be given early in the morning, unless the bowels were relieved.

2nd.—The aperient draught (which was given) has produced five liquid motions. He is restless; his extremities cold; his pulse very feeble; his mind wandering, but still answers collectedly to any question; when left to himself it is that the functions of the brain fail him. I tried to remove some of the incrustations from the face, and succeeded with such unexpected ease that I exposed (without causing a complaint) the cutis of the whole face, and covered it with the calamine. To prevent any more purging, I gave him twenty drops of laudanum in brandy and water.

10 o'clock, P.M.--Dead. The whole surface has been kept constantly covered with calamine to this hour.

The general appearance of the body is extraordinary. Countless pustules remain; the cuticle of each thickened, tough, and containing little or no pus; four points or dots of matter are to be seen laying on the cutis. I may say

countless pustules are to be seen perfectly healed, and there is not an *ulcerating* spot any where. The legs are not, nor ever have been, swollen. Though large confluent patches are to be seen everywhere, it is curious to observe how distinct the eruption keeps in other parts, though the pustules everywhere almost touch each other. This morning the florid colour of the whole surface was very striking; even those livid patches noticed in the early stage are perfectly healed and red. I cannot but refer these healthful (if I may use the expression) appearances to the generous and stimulating diet allowed, and to the medicines employed. I cannot but refer his death to the action of the purgative. I made no post-mortem examination, under a belief that morbid dissections cannot determine such a question.

There are some peculiarities attending this case, which I can neither refrain from again noticing, nor can offer any probable conclusions as deducible from them. First, The absence of pus in the majority of the pustules in the advanced stage of the disease; and, second, the

thickened state of the cuticle of each pustule at that period.

The existence of appetite to the last, which was even painful from his inability to gratify it ; the due, and even increased secretion from the kidneys ; the refreshing natural sleep which he often obtained ; the moist and expanded state of tongue—are all circumstances opposed to the belief that the constitutional disturbance is fever in this disease, particularly when we consider the kind of diet allowed, and the course of medicine employed from the commencement of the attack, which in cases of fever, even of the typhoid character, would have quickly led to the loss of life, or the immediate embarrassment of any organ failing in its function.

I am induced to believe that this poor fellow's life was considerably lengthened by the remedies employed ; and, in all probability, would have been saved had not his mouth and fauces been so thickly covered with the eruption.

HENRY GEORGE.

Phillimore-place, Kensington,  
July 7, 1832.



*To the Editor of the Medical Gazette.*

SIR,

THE following case is partly related from memory, but the general statement is correct. It paints a horrid scene, but no language could adequately describe the patient's sufferings and struggles. He had certainly more than twelve epileptic paroxysms in the progress of the disease.

I am, Sir,

Yours most obediently,

HENRY GEORGE.

Phillimore-place, Kensington,  
August 10, 1833.

A gentleman, twenty-one years of age, on the 27th of June, felt severely indisposed; suffering from rigors, intense pain in the head and back. Early in the evening of the 28th some spots were observed about the face and body. He retired to bed, passed a wretched night, and on the morning of the 29th I first saw him. His mind was wandering; his limbs and voice tremulous;

his tongue dry, and covered with a brownish-red crust; his pulse 120; his face was swelled, and covered with small pox pustules; his bowels had been relieved, and he had voided plenty of urine. The nourishment to consist of beef-tea, arrow-root, &c., and I directed the following medicines:—

R Liq. Amm. Acet. ʒiij.; Amm. Carb. gr. iij.; Sp. Ether. Nit. ʒss.; Tinct. Hyos. ʒss.; Aq. Puræ, ʒj, M. f. haust. 6tis horis sumend.

June 30th.—Had passed a tolerable night, about four hours' sleep; takes his nourishment; the face is much more swelled, and is one mass of eruption. Bowels open.

Cont. omnia.

July 1st.—Yesterday was passed in great restlessness and agitation. His appearance is now frightful; the whole surface of the body, with the exception of the abdomen, one mass of eruption, and, excepting a small space on each temple, there is not the least portion of sound cuticle to be seen over the whole face; the ears also are covered with the eruption, and the whole skin of a dark livid colour. Early this

morning he had a violent epileptic paroxysm, which lasted some time, requiring five persons to restrain him. On the cessation of the fit, I endeavoured to administer an enema containing two drachms of laudanum, but owing to the violence of his struggles one-half of it was lost. I directed the following medicine to be given, and ordered wine-whey, beef-tea, &c. for his nourishment:—

R Amm. Carb. ʒss. ; Acid. Cit. ʒss. ; P. Ipec. comp. gr. xij. ; Sp. Ether. Nit. ʒij. ; Aq. Puræ, ʒiij. M. f. cap. dim. stat. et post. hor. 3 repet.

10 o'clock, P.M.—Has taken plenty of nourishment—taken it even with avidity. Has had another fit. Has slept a little. His appearance now is truly distressing : trembling every limb, conscious of your presence, recognizing every one, but rambling and talking in all the wildness of furious insanity. Has passed plenty of nervous urine ; pulse very rapid ; skin hot and moist. I succeeded in injecting an enema containing two drachms of laudanum, and directed the wine-whey, with beef-tea, to be given frequently during the night.

2nd.—Had four hours' sleep in the night ; is more tranquil, but still very much disturbed. Passed plenty of urine. Administered a soap injection, and continued his nourishment.

10 o'clock, P.M.—The bowels have been relieved twice. No alteration in symptoms. Repeated the injection, with two drachms of laudanum.

3rd.—Has had some sleep in the course of the night. Retention of urine, the bladder reaching to the umbilicus ; introduced the catheter. Continued his nourishment, covered the whole body with the calamine, and ordered the following medicine :—

R Ammon. Carb., Acid. Citric. aa. gr. xv. ; Sp. Ether. Nit. ʒss. ; Tr. Cinch. c. ʒj. ; Tr. Opii, gtt. vj. ; Aq. Puræ, ʒx. M. f. haust. 6tis horis.

10 o'clock, P.M.—Introduced the catheter. Another fit has occurred during the day.

I will pass over the six following days. The medicines were continued, and castor-oil or rhubarb occasionally given. I was compelled to use the catheter night and morning, until the morning of the 6th ; and on the 7th an attack of



diarrhœa was restrained by the use of chalk and opium. In this interval it was necessary to watch him closely, as he showed every disposition to destroy himself. On the 5th his abdomen had become tympanitic.

9th, 10 o'clock, A.M.—Had a violent epileptic paroxysm in the night; presents at this moment the most horrid spectacle that can be imagined; lies, and while lying, trembles from head to foot; his countenance suspiciously wild, and expressive of the darkest intentions; recognizes every one, and answers collectedly to any question, but his mind immediately wanders. Has not closed his eyes for two nights and days; urine plentiful; bowels open; innumerable pustules have been opened by his parents and attendants, and are now healed. There is not the smallest portion of exposed cutis to be seen anywhere. There is no swelling of the extremities, and the face, which has been completely peeled of its cuticle, (this was accomplished without difficulty, and occasioned scarcely any suffering,) is not at all swelled. The eyes are now open, and the incrustations formed by the powder are

now in places falling off, exposing a perfectly smooth skin. A considerable abscess under each great-toe and one heel has been opened, discharging thin putrid matter mixed with blood: the smell was dreadful. I directed ten grains of soap and opium pill to be given immediately, and four grains to be given every two hours until sleep was procured, continuing his nourishment, which, for the last two or three days, had consisted of strong beef-tea, egg and wine, ale, &c.

10th, 9 o'clock, A.M.—Has taken ten of the pills, has passed a more tranquil night; the *trembling* has ceased; gave a dessert-spoonful of castor-oil; continued his nourishment, and the draughts with ammonia, &c. nearly as before.

I will now pass on to the 24th.—During this interval, many of the usual difficulties were encountered. At his earnest request, animal food has been allowed him daily. The following circumstances I relate entirely from memory; any inaccuracy can only relate to time (a day or so.) On the 14th, the incrustations formed by the

## CASES.

powder on the face had been totally removed, leaving the skin perfectly smooth, having a florid appearance, and, but for the expression of the eye, his countenance was healthful. From this time to the present, incrustations have been forming on the site of each pustule, and on removing them slight depressions are to be observed: these, I have no doubt, will gradually disappear. The error, I believe, was in removing the incrustations as they loosened, instead of applying more calamine and still longer excluding the atmosphere. I had forgotten his face, from my anxiety for his life: all this was done by his attendants, and the face rubbed over with oil without my observing it. Yesterday, circumstances induced me to administer some purgative medicine: it operated twice. Immediately after the second operation, which was liquid, he had a most violent fit. A consultation with an eminent physician followed; and the following medicines were ordered:—

R Muriat. Morphicæ, gr. j.; Acid. Muriat. gtt. j.; Aqua Distill. ʒj. M. f. solut.

R Solut. Morph. gtt. x.; Decoct. Cinch. ʒx.; Tr. ejusd. ʒj. M. f. haust. 6tis horis.

26th.—We again met in consultation. There had been no return of the fits, but he was restless; little or no sleep; the urine, which hitherto has been so copious, is now very scanty, and depositing largely.

R Ferri Carbon. ʒss.; Aq. Puræ, ʒx. M. f. haust. 6tis horis.

27th.—Appears going on well; has passed plenty of urine.

August 5th.—He has gone on with the carbonate of iron, the dose of which has been increased to two scruples. Has had no fit; has been gaining strength, and even flesh; his bowels have acted daily without medicine, and the urine has been plentiful. His appetite very keen, which has been indulged; his mind much stronger, but he is still occasionally rambling, and very irritable.

22nd.—Has had no fit. Has gained flesh and strength; but his mind is very unsettled; it was determined to separate him entirely from his relations, and remove him to a lodging at some distance. The carbonate of iron has been continued to this day.

25th.—The change appears to have increased



his irritability ; he has taken great antipathy to his attendant. Yesterday he refused all food, had no sleep in the night, and is this morning a most pitiable object ; his fingers are rigid, his skin cold and clammy, pulse quick, universal tremor, &c.

R. Amm. Carb. gr. x. ; Sp. Ether. Nit. ʒij. ; Tr. Opii. gtt. 40 ; Tr. Auran ʒij ; Aq. Puræ, ʒiiss. M. f. Mist. cap. dim. stat. et post. hor. ij. repet.

26th.—Took plenty of nourishment yesterday ; slept well ; is more tranquil this morning. The following draughts were ordered yesterday afternoon, and have been continued.

R. Amm. Carb. gr. vj. ; Sp. Ether Nit. ʒj. ; Tinct. Hyos. ʒss. ; Aq. Puræ, ʒx. M. f. haust. 6tis horis.

27th.—Much improved.

28th,—In consultation, the following alteration was made in his plan of management : his wine was discontinued, (usually four or five glasses,) and the following medicines to be given.

R. Ext. Hyos. gr. iij. ; Gum Camp. gr. j. ; Ext. Colci. gr. i. M. f. pil. h. s. s.

R. Sp. Ether. Nit. ʒj. ; Tr. Hyos. gtt. xx. ; Mist. Camp. ʒv. ; Inf. Senn. ʒvj. M. f. haust. ter die.

30th.—Has been very restless through the

night. This morning there has been violent flushing of the face ; he is now pale, cold, a degree of stupor hanging over him ; very dilated pupil ; cannot tell the hour, and seems unconscious of your presence ; pulse very quick ; he does not now walk erect ; in moving, his motions are very hurried, and his body considerably bent. He has had three motions daily the last two days, and passed plenty of urine. I immediately directed the following medicine, and ordered his wine to be given him.

R Amm. Carb. gr. vj. ; Sp. Ether. Nit. ʒj. ; Tr. Hyos. ʒss. ; Auran. ʒj. ; Aq. Puræ, ʒx. M. f. haust. 6tis horis.

R Ext. Hyos. gr. iij. ; Pil. Rhæi. c. gr. vj. ; Ol. Carui gtt. j. M. f. pil. ij. h. s. s.

Sept. 2d.—Is considerably better ; his nights have been passed quietly ; is tranquil ; his bowels regular. He yesterday read some passages in the newspaper correctly ; is tractable with, and even thankful to, his attendant.

Contin. Omnia.

LONDON:

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